IN THE CLAIMS

1. (Currently Amended) An information receiving/display apparatus configured to receive and present information ~~for at least one of remotely discernible senses and information for at least one of proximately discernible senses~~, comprising:

an information display plane, wherein the information display plane presents information which is proximately discernable with a proximately discernable sense, and wherein the information display plane presents information which is remotely discernable with a remotely discernable sense ~~and display them on an information display plane~~.

2. (Currently Amended) The information receiving/display apparatus according to claim 1 wherein said remotely discernible sense is one of a visual sense, an auditory sense, and an ~~or~~ olfactory sense.

3. (Currently Amended) The information receiving/display apparatus according to claim 1 wherein said proximately discernible sense is one of a tactual sense, and a ~~or~~ gustatory sense.

4. (Currently Amended) The information receiving/display apparatus according to claim 1 wherein the information which is proximately discernable and the information which is remotely discernable ~~said two or more of information for remotely discernible senses and said information for proximately discernible senses~~ are given as functions of positions on said information display plane.

5. (Original) The information receiving/display apparatus according to claim 1 wherein information of sound, surface roughness, relative surface temperature or relative surface humidity is represented on said information display plane in addition to image information.

6. (Currently Amended) The information receiving/display apparatus according to claim 1 wherein ~~said information for at least one of proximately discernible senses~~ the information which is proximately discernable can be obtained from both the front and the back of said information display plane.

7. (Original) The information receiving/display apparatus according to claim 1 wherein said information display plane is made of an optical fiber or an optical waveguide having a liquid core, and a fiber having a liquid core.

8. (Currently Amended) The information receiving/display apparatus according to claim 7 wherein image information is displayed on the information display plane by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a selected portion in response to an image to be displayed~~, and thereby leading out it externally~~.

9. (Currently Amended) An information receiving/display apparatus configured to receive sensory information other than visual information and audio information, in addition to visual information and/or audio information, comprising:

an information display plane, wherein the information display plane presents the sensory information other than visual information and audio information, in addition to the visual information and/or the audio information ~~and display it on an information display plane~~.

10. (Original) The information receiving/display apparatus according to claim 9 wherein said visual information, said audio information and the other sensory information are given as functions of positions on said information display plane.

11. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is tactual information.

12. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is information about relative temperature.

13. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is olfactory information.

14. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is composed of said image information.

15. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is tactual information, and the tactual information is composed of said image information.

16. (Original) The information receiving/display apparatus according to claim 9 wherein the other sensory information is information about relative surface temperature or information about relative surface humidity, and the relative surface temperature information or the relative surface humidity information is composed of said image information.

17. (Original) The information receiving/display apparatus according to claim 9 wherein said information display plane is made of an optical fiber or an optical waveguide having a liquid core, and a fiber having a liquid core.

18. (Currently Amended) The information receiving/display apparatus according to claim 17 wherein image information is displayed on the information display plane by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a portion selected in response to an image to be displayed~~, and thereby leading out it externally~~.

19. (Currently Amended) An information receiving/display apparatus configured to receive sensory information other than visual information and audio information, in addition to visual information and/or audio information, comprising:

an information display plane, wherein the information display plane presents the sensory information other than visual information and audio information, in addition to the visual information and/or the audio information ~~and display it on an information display plane~~,

wherein said information display plane comprises[[:]] an optical fiber or an optical waveguide having a liquid core for visual information[[;]], and a fiber for information for another sensory information having a liquid core,

wherein the information display plane is configured to display image information ~~being displayed~~ by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a portion selected in response to an image to be displayed~~, and thereby leading out it externally~~,

wherein the information display plane is configured to form a projection ~~being formed~~ or produce a temperature change ~~being produced~~ on a surface of said fiber at a portion selected in response to the image information to be displayed~~, and/or, a liquid forming said liquid core or molecules of a substance contained in said liquid being emanated from a surface of said fiber at a portion selected in response to image information to be displayed~~.

20. (Original) The information receiving/display apparatus according to claim 19 wherein said light scattering elements are bubbles.

21. (Original) The information receiving/display apparatus according to claim 20 wherein said bubbles are generated by bringing about cavitation in said liquid forming said liquid core of said optical fiber or optical waveguide.

22. (Original) The information receiving/display apparatus according to claim 20 wherein said bubbles are generated by propagating ultrasonic waves from the outer circumferential surface toward the center axis of said optical fiber or optical waveguide.

23. (Original) The information receiving/display apparatus according to claim 22 wherein said ultrasonic waves are generated by piezoelectric elements provided on the outer circumferential surface of said optical fiber or optical waveguide.

24. (Original) The information receiving/display apparatus according to claim 20 wherein said bubbles can be controlled in size.

25. (Original) The information receiving/display apparatus according to claim 20 wherein sizes of said bubbles are distributed substantially symmetrically about the center axis of said optical fiber or optical waveguide.

26. (Original) The information receiving/display apparatus according to claim 19 wherein said light scattering elements are fine particles.

27. (Original) The information receiving/display apparatus according to claim 26 wherein said fine particles are controlled in position by propagating ultrasonic waves from the outer circumferential surface toward the center axis of said optical fiber or optical waveguide.

28. (Original) The information receiving/display apparatus according to claim 27 wherein said ultrasonic waves are generated by piezoelectric elements provided on the outer circumferential surface of said optical fiber or optical waveguide.

29. (Original) The information receiving/display apparatus according to claim 27 wherein said fine particles are controlled in position and/or orientation by introducing an optical field into said optical fiber or optical waveguide from light control elements provided on the outer circumferential surface of said optical fiber or optical waveguide.

30. (Currently Amended) An information receiving/display apparatus configured to receive visual information and another sensory information other than visual information and audio information, in addition to visual information and/or audio information or in addition to visual
information and audio information, comprising:

an information display plane, wherein the information display plane presents the information ~~and display it on an information display plane~~, wherein said information display plane comprises:

a plurality of optical fibers or optical waveguides having liquid cores for visual information;

a plurality of fibers for information for another sensory information having liquid cores;

a plurality of first control signal lines for visual information extending across said optical fibers or optical waveguides; and

a plurality of second control signal lines for said another sensory information extending across said fibers,

first piezoelectric elements ~~being provided~~ on outer circumferential surfaces of said optical fibers or optical waveguides at intersections between said optical fibers or optical waveguides and said first control signal lines,

second piezoelectric elements ~~being provided~~ on outer circumferential surfaces of said fibers at intersections between said fibers and said second control signal lines,

wherein the information display plane is configured to display image information ~~being displayed~~ by scattering light introduced into said cores from one end or opposite ends of selected one of said optical fibers or waveguides selected in response to image information to be displayed, by means of bubbles that are generated by cavitation brought about in a liquid forming said core by propagating ultrasonic waves from the outer circumferential surface of said optical fiber or optical waveguide by driving said first piezoelectric element at the intersection between selected said optical fiber or optical waveguide and one of said first control signal lines selected in response to said image information to be displayed, and leading out the scattered light externally,

wherein the information display plane is configured to form a projection ~~being formed~~ or produce a temperature change ~~being produced~~ on a surface of one of said fibers selected in response to said image information to be displayed, by propagating ultrasonic waves from the outer circumferential surface of selected said fiber by driving one of said second piezoelectric elements at the intersection between selected said fiber and one of one of said second control signal lines selected in response to said image information to be displayed, and/or, said liquid forming said liquid core or molecules of a substance contained in said liquid being emanated from the surface of one of said fibers selected in response to said image information to be displayed.

31. (Original) The information receiving/display apparatus according to claim 30 wherein one of said piezoelectric elements at the intersection between selected said fiber and selected said second control signal line is driven to propagate ultrasonic waves from the outer circumferential surface of said fiber and thereby bring about cavitation and generate bubbles in said liquid forming said core, such that a projection is made as representation of tactual information on the surface of said fiber due to a pressure of bubbles.

32. (Original) The information receiving/display apparatus according to claim 30 wherein one of said piezoelectric elements at the intersection between selected said fiber and selected said second control signal line to propagate ultrasonic waves from the outer circumferential surface of said fiber to increase the temperature of said liquid forming the core as representation of relative surface temperature information.

33. (Original) The information receiving/display apparatus according to claim 30 wherein one of said piezoelectric elements at the intersection between selected said fiber and selected said second control signal line to propagate ultrasonic waves from the outer circumferential surface of said fiber to emanate said liquid forming the core or molecules of a substance contained in said liquid as representation of relative surface humidity information or olfactory information.

34. (Original) The information receiving/display apparatus according to claim 30 wherein said optical fibers or optical waveguides have light sources at one-side ends or opposite ends thereof.

35. (Currently Amended) The information receiving/display apparatus according to claim 34 wherein each of said light ~~source~~ sources is a semiconductor laser.

36. (Previously Presented) The information receiving/display apparatus according to claim 30, wherein said optical fibers or optical waveguides include those for red, those for green and those for blue, said optical fibers or optical waveguides for red having red emitting light sources at one-side ends or opposite ends thereof, said optical fibers or optical waveguides for green having green emitting light sources at one-side ends or opposite ends thereof, and said optical fibers or optical waveguides for blue having blue emitting light sources at one-side ends or opposite ends thereof.

37. (Original) The information receiving/display apparatus according to claim 36 wherein said red emitting light sources, said green emitting light sources and said blue emitting light sources are semiconductor lasers.

38. (Original) The information receiving/display apparatus according to claim 30 wherein said optical fibers, or optical waveguides, and said fibers are arranged to form a concave plane as a whole.

39-40. (Canceled)

41. (Original) ~~An information receiving/display~~ A method ~~characterized in~~ for receiving and displaying information comprising:

receiving sensory information other than visual information and audio information, in addition to visual information and/or audio information;[[,]] and

~~displaying it~~ presenting the information on an information display plane, wherein said information display plane comprises[[:]] an optical fiber or an optical waveguide having a liquid core for visual information[[;]], and a fiber for information for another sensory information having a liquid core,

wherein the information display plane is configured to display image information ~~being displayed~~ by scattering light introduced into said core from one end or opposite ends of said optical fiber or waveguide by means of light scattering elements in said core at a portion selected in response to an image to be displayed, and thereby leading out it externally,

wherein the information display plane is configured to form a projection ~~being formed~~ or produce a temperature change ~~being produced~~ on a surface of said fiber at a portion selected in response to image information to be displayed~~, and/or, a liquid forming said liquid core or molecules of a substance contained in said liquid being emanated from a surface of said fiber at a portion selected in response to image information to be displayed~~.

42. (Currently Amended) A display configured to receive visual information for a remotely discernible sense and tactual information for a proximately discernible sense, comprising:

an information display plane, wherein the information display plane is configured to form an image ~~is formed on an information display plane~~ in response to the visual information and a projection ~~is formed on the information display plane~~ in response to the tactual information.

43. (Previously Presented) The display according to claim 42 wherein the remotely discernible sense is a visual sense.

44. (Previously Presented) The display according to claim 42 wherein the proximately discernible sense is a tactual sense.

45. (Previously Presented) The display according to claim 42 wherein information of sound, surface roughness, relative surface temperature or relative surface humidity is represented on said information display plane.

46. (Previously Presented) The display according to claim 42 wherein the tactual information can be obtained from both the front and the back of said information display plane.

47. (Previously Presented) The display according to claim 42 wherein the information display plane comprises an optical fiber or an optical waveguide having a liquid core.

48. (Currently Amended) The display according to claim 47 wherein the information display plane forms an image ~~is formed~~ by scattering light introduced into said liquid core using a light scattering element at a selected portion of the optical fiber.

49. (Currently Amended) The display according to claim 47 wherein the information display plane comprises a fiber for tactual representation having a liquid core~~, wherein the~~ and a cavitation forming element at a selected portion of the fiber, wherein the cavitation forming element is capable of being driven to bring about cavitation and generate bubbles in the liquid core of the fiber~~, such that~~ in order to form a projection ~~is formed~~ on the surface of said fiber representing the tactual information.

50. (Currently Amended) A display configured to receive visual information for a remotely discernible sense and olfactory information for a proximately discernible sense, comprising:

an information display plane, wherein the information display plane is configured to form an image ~~is formed on an information display plane~~ in response to the visual information

and emit a vapor ~~is emitted from the information display plane~~ in response to the olfactory information.

51. (Previously Presented) The display according to claim 50 wherein the remotely discernible sense is a visual sense.

52. (Previously Presented) The display according to claim 50 wherein the proximately discernible sense is a tactual sense.

53. (Previously Presented) The display according to claim 50 wherein information of sound, surface roughness, relative surface temperature or relative surface humidity is represented on said information display plane.

54. (Previously Presented) The display according to claim 50 wherein the olfactory information can be obtained from both the front and the back of said information display plane.

55. (Previously Presented) The display according to claim 50 wherein the information display plane comprises an optical fiber or an optical waveguide having a liquid core.

56. (Previously Presented) The display according to claim 50 wherein the image is formed by scattering light introduced into said liquid core by means of light scattering elements at a selected portion of the optical fiber.

57. (Currently Amended) The display according to claim 55 wherein the information display plane comprises a fiber for olfactory representation having a liquid core~~, wherein a~~ and a cavitation forming element at a selected portion of the fiber, wherein the cavitation forming element is capable of being driven to bring about cavitation and generate bubbles in the liquid core of the fiber~~, such that~~ in order to form and emit a vapor ~~is formed and emitted~~ through the surface of said fiber representing the olfactory information.